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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/768,431	BARCLAY ET AL.	
	Examiner	Art Unit	
	OLUMIDE T. AJIBADE AKONAI	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 22-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 1, 2011 have been fully considered but they are not persuasive. Regarding claims 1 and 18, the applicants' representative asserts that Lin as modified fails to disclose the network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Specifically, the applicants' representative asserts that the network component of Lin (base station) and the network component of Wong (HLR) are different, and thus not similar to applicants' claim 1 because claim requires only one "network component". The examiner respectfully disagrees with the applicants' representative's analysis of claims 1 and 18. Lin does disclose that the network component is a base station, but does not specifically disclose that the base station storage medium comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Wong is used to teach the functionality of having a network component comprising one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Therefore, Lin as modified by Wong (indicating the **incorporation of the feature** of a storage medium being one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium, in a base station (the examiner notes a base station already has a form of storage medium), and not

incorporation of the whole HLR as argued by the applicants' representative), clearly reads on the applicants' claimed limitation.

The applicants' representative further asserts that the combination of Lin and Wong is improper because a base station as taught by Lin is not equivalent to the HLR as taught by Wong. The examiner respectfully disagrees with the applicants' representatives arguments. In response to applicant's argument that that the combination of Lin and Wong is improper because a base station as taught by Lin is not equivalent to the HLR as taught by Wong, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Claims 1 and 18 disclose "**a network component**". The network component comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Lin does disclose that the network component is a base station, but does not specifically disclose that the base station storage medium comprises one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. As already mentioned above, Wong is used to teach the functionality of having a network component comprising one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Even though the network components of Lin and Wong

are different, Wong clearly discloses a storage medium comprising one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Therefore, Lin as modified by Wong clearly reads on the applicants' claimed limitation of having a network component comprising one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium.

The applicants' representative also argues that the proposed combination of Lin and Wong would not result in a "properly functioning system". The examiner respectfully disagrees. As already disclosed above, Wong is used to teach the functionality of having a network component comprising one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium. Therefore, Lin as modified by Wong, by incorporating of the feature of a storage medium being one of a magnetic data storage medium, an optical data storage medium, a biological data storage medium, or an atomic data storage medium, in a base station clearly reads on the applicants' claimed limitation and does result in a properly functioning system.

Claims 1-20 and 22-26 thus stand rejected and repeated below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lin 20020025824** in view of **Wong 7,039,403**.

Regarding **claim 1**, Lin discloses an apparatus, comprising: a network component (see fig. 1, p.2, [0032]) operable to employ a) one or more call characteristics to make a determination to initiate a request to a switch

component for one or more positions of one or more mobile stations (p.5, [0072]-[0073]; phone number may be used, or a call requested, to thereby obtain a location information from a switch (base station)) and b) at least one call parameters to identify one or more cellular network cells associated with the one or more mobile stations (p.5, [0072]), wherein the at least one call parameter employed to identify one of the one or more cellular network cells is a telephony number of at least one of the one or more mobile stations (initiating a call would necessitate a correct location, wherein calling a phone results in obtaining location, the phone number called would be associated with a location area identifier, see p.3-4, [0052]-[0054]); and wherein the network component is operable to receive, in response to the request, the one or more positions of the one or more mobile stations from a position component operable to determine the one or more positions of the one or more mobile stations continuously (see p.5, [0071]-[0075], especially [0073] wherein it indicates that the location is updated continuously).

Lin does not disclose wherein the network component comprises one of a magnetic, optical, biological, or atomic data storage medium.

Wong however, discloses a network component comprising one of magnetic, optical, biological, or atomic data storage medium (HLR with optical or magnetic storage device, see fig. 2, col. 5, lines 3-18).

It what therefore have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching Wong into the Lin by having a network component that comprises one of a magnetic, optical,

biological, or atomic data storage medium such as an optical or magnetic data storage for the purpose of storing subscriber information in the network element.

Regarding **claim 18**, Lin discloses a method, comprising the steps of: initiating a request from a network component to a switch component for one or more positions of one or more mobile stations through employment of a) one or more call characteristics (p.5, [0072]-[0073]; phone number may be used, or a call requested, to thereby obtain a location information from a switch (base station)) and b) at least one call parameter to identify one or more cellular network cells associated with the one or more mobile stations (p.5, [0072]), wherein the at least one call parameter employed to identify one of the one or more cellular network cells is a telephony number of at least one of the one or more mobile stations (initiating a call would necessitate a correct location, wherein calling a phone results in obtaining location, the phone number called would be associated with a location area identifier, see p.3-4, [0052]-[0054]); receiving, in response to the request, the one or more positions of the one or more mobile stations (see p.5, [0071]-[0075], especially [0073] wherein it indicates that the location is updated continuously); and determining the one or more positions of the one or more mobile stations continuously (see p.5, [0071]-[0075], especially [0073] wherein it indicates that the location is updated continuously).

Lin does not disclose wherein the network component comprises one of a magnetic, optical, biological, or atomic data storage medium.

Wong however, discloses a network component comprising one of magnetic, optical, biological, or atomic data storage medium (HLR with optical or magnetic storage device, see fig. 2, col. 5, lines 3-18).

It what therefore have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching Wong into the Lin by having a network component that comprises one of a magnetic, optical, biological, or atomic data storage medium such as an optical or magnetic data storage for the purpose of storing subscriber information in the network element.

Regarding **claim 24** as applied to claim 1, Lin further discloses a network component that that is operable to employ the at least one call parameter to identify one or more cellular network cells associated with the one or more mobile stations (see p.5, [0071]-[0074]).

4. Claims 2-17, 19, 20, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lin 20020025824** in view of **Wong 7,039,403** and **O'Donnell 6,266,514**.

Regarding **claim 2** as applied to claim 1, Lin as modified by Wong discloses the claimed limitation except discloses wherein the network component is operable to perform a comparison of the one or more call characteristics with one or more thresholds to make the determination to initiate the request for the one or more positions of the one or more mobile stations.

In the same field of endeavor, O'Donnell discloses a network component (base station controller BSC, see figs. 3, lines 33-38) operable to perform a comparison of the one or more call characteristics (measurements are

compared to specified threshold values, signal strength, see col. 6, lines 6-23, 39-46) with one or more thresholds (see col. 6, lines 6-23) to make the determination to initiate the request for the one or more positions of one or more mobile stations (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 3** as applied to claim 2, Lin as modified by Wong and O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein the one or more call characteristics comprise a pilot signal strength characteristic (signal strength, see col. 6, lines 39-46), and wherein the one or more thresholds comprise a pilot signal strength threshold (see col. 6, lines 6-23), and wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to perform a comparison of the pilot signal strength characteristic with the pilot signal strength threshold (measurements are compared to specified signal strength threshold values, see col. 6, lines 6-23, 39-46); and wherein the network component makes the determination to initiate the request for the one or more positions of the one or more mobile stations based on a result of the comparison of the pilot signal strength characteristic with the pilot signal strength

threshold (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 4** as applied to claim 2, Lin as modified by Wong and O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to perform the one or more call characteristics (signal strength, see col. 6, lines 39-46) to create one or more call statistics (dropped calls see col. 6, lines 60-63), and wherein the one or more thresholds comprise one or more call characteristic thresholds (see col. 6, lines 6-23) and one or more call statistic thresholds (accumulation of dropped calls, see col. 6, lines 60-67, col. 7, lines 1-7); and wherein the network component is operable to perform a comparison of the one or more call statistics with the one or more call statistic thresholds (when dropped calls are identified, the positioning function of the BSC is activated to determine the location of the mobile station, see col. 6, lines 60-67, col. 7, lines 1-9); and wherein the network component is operable to perform a comparison of the one or more call characteristics with the one or more call characteristic thresholds (measurements are compared to specified signal strength threshold values, see col. 6, lines 6-23, 39-46) and the comparison of the one or more call

statistics with the one or more call statistic thresholds to make the determination to initiate the request (when dropped calls are identified, the positioning function of the BSC is activated to determine the location of the mobile station, see col. 6, lines 60-67, col. 7, lines 1-9).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 5** as applied to claim 2, Lin as modified by Wong and O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) comprises an interface (inherent since the BSC receives one or more quality characteristic threshold levels from the operations and management center, OMC 1, thereby requiring that the BSC have an interface to receive the threshold values from the OMC, see figs. 3 and 4, col. 3, lines 60-66), and wherein the network component is operable to receive the one or more thresholds from a service provider (operations and management center, OMC 1, see figs. 3 and 4, col. 3, lines 60-66) through employment of the interface (BSC receives one or more quality characteristic threshold levels from the operations and management center, OMC 1, see figs. 3 and 4, col. 3, lines 60-66).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin,

Wong and O'Donnell by employing one or more quality thresholds at the BSC in order to determine different levels of network coverage.

Regarding **claim 6** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except wherein the network component is operable to employ the determination to initiate the request to promote an avoidance of congestion in one or more cellular network communication paths.

However, O'Donnell discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to employ the determination to initiate the request to promote an avoidance of congestion in one or more cellular network communication paths (automatically mapping the areas of poor coverage helps in that minimal loading is required on the current system, see col. 7, lines 36-47).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin and Wong by employing the information on the areas with poor network coverage in order to reduce overloading or cell traffic in that area/region of a network map.

Regarding **claim 7** as applied to claim 6, Lin as modified by Wong and O'Donnell disclose the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) makes the determination to initiate the request upon an exceedance of the one or more call characteristics relative to one or more thresholds (BSC requests for the position of mobile station 4 if the signal strength is above a specified threshold

value, see figs. 3 and 4, col. 6, lines 6-38); and wherein upon the exceedance of the one or more call characteristics relative to the one or more thresholds, the network component and the position component (GPS receiver 220, see fig. 2, col. 5, line 6) are operable to cooperate to obtain the one or more positions of the one or more mobile stations (see col. 4, lines 66-67, col. 5, lines 1-7).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin and Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 8** as applied to claim 7, Lin as modified by Wong and O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein upon a termination of the exceedance of the one or more call characteristics relative to the one or more thresholds (see col. 5, lines 33-59), the network component (base station controller BSC, see figs. 3, lines 33-38) and the position component (GPS receiver 220, see fig. 2, col. 5, line 6) are operable to cooperate to discontinue attainment of the one or more positions of the one or more mobile stations (see col. 5, lines 33-59).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin and Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 9** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except wherein the network component is operable to employ the one or more call characteristics to perform a selection of the one or more mobile stations from a plurality of mobile stations, and wherein the network component is operable to employ the selection to formulate the request for the one or more positions of the one or more mobile stations from the plurality of mobile stations.

However, O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to employ the one or more call characteristics (signal strength, see col. 6, lines 39-46) to perform a selection of the one or more mobile stations from a plurality of mobile stations (mobile stations 4 transmit signal quality measurements to the BSC and if the measured signal strength is below of above a threshold value, the BSC identifies the location of the associated mobile station 9, see figs. 3 and 4, col. 6, lines 6-23), and wherein the network component is operable to employ the selection to formulate the request for the one or more positions of the one or more mobile stations from the plurality of mobile stations (see figs. 3 and 4, col. 6, lines 6-23).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 10** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except wherein the one or more mobile stations are associated with the one or more cellular network cells; and wherein the network component is operable to employ the one or more call characteristics to perform a selection of the one or more cellular network cells from a plurality of cellular network cells; and wherein the network component is operable to employ the selection to formulate the request for the one or more positions of the one or more mobile stations that are associated with the one or more cellular network cells.

However, O'Donnell discloses wherein the one or more mobile stations (mobile stations 4, see fig. 3, col. 6, line 11) are associated with the one or more cellular network cells (see col. 5, lines 60-67, col. 6, lines 1-5); and wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to employ the one or more call characteristics (signal strength, see col. 6, lines 39-46) to perform a selection of the one or more cellular network cells from a plurality of cellular network cells (mobile stations 4 transmit signal quality measurements to the BSC and if the measured signal strength is below of above a threshold value, the BSC identifies the location of the associated mobile station 9, see figs. 3 and 4, col. 5, lines 60-67, col. 6, lines 1-23); and wherein the network component is operable to employ the selection to formulate the request for the one or more positions of the one or more mobile stations that are associated with the one or more cellular network cells (see figs. 3 and 4, col. 6, lines 6-23).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin, Wong and O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station and determining a visual indication of network coverage for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 11** as applied to claim 10, Lin as modified by Wong and O'Donnell disclose the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) is operable to employ the switch component (mobile switching center MSC, see col. 5, lines 40-42) to identify the one or more mobile stations that are associated with the one or more cellular network cells (see col. 5, lines 32-49); and wherein the network component is operable to employ the switch component to determine the one or more positions of the one or more mobile stations that are associated with the one or more cellular network cells (see col. 5, lines 32-49).

Regarding **claim 12** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except wherein the network component receives the one or more positions of the one or more mobile stations in response to the request; and wherein the network component is operable to is operable to employ the one or more positions of the one or more mobile stations and the one or more call characteristics to develop a coverage map.

However, O'Donnell discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) receives the one or more

positions of the one or more mobile stations in response to the request (mobile station transmits location information to the BSC, see figs. 3 and 4, col. 6, lines 24-28); and wherein the network component is operable to is operable to employ the one or more positions of the one or more mobile stations and the one or more call characteristics to develop a coverage map (the determined geographical can be mapped to provide a visual representation of areas with poor coverage, see col. 4, lines 45-52).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin, Wong and O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station and determining a visual indication of network coverage for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 13** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except the switch component that provides the one or more call characteristics to the network component, wherein the network component is operable to employ the one or more call characteristics to make a determination to initiate a request to the switch component; and wherein the switch component is operable to employ to obtain the one or more positions of the one or more mobile stations based on the request to the switch component.

O'Donnell however discloses the switch component (mobile switching center MSC, see col. 5, lines 40-42) that provides the one or more call characteristics (signal strength, see col. 6, lines 39-46) to the network component

(base station controller BSC, see figs. 3, lines 33-38), wherein the network component is operable to employ the one or more call characteristics to make a determination to initiate a request to the switch component (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38); and wherein the switch component is operable to employ to obtain the one or more positions of the one or more mobile stations based on the request to the switch component (see col. 5, lines 33-49).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin and Wong with the teaching of O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station and determining a visual indication of network coverage for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 14** as applied to claim 13, Lin further discloses wherein the network component (see fig. 1, p.2, [0032]) provides to the switch component at least one call parameter (see p.5, [0071]-[0074]); wherein the switch component employ is operable to employ the at least one call parameter to perform an identification of the one or more mobile stations from a plurality of mobile stations; (see p.5, [0071]-[0074]) wherein the switch component is operable to employ the identification of the one or more mobile stations from the plurality of mobile stations to obtain the one or more positions of the one or more mobile stations (see p.5, [0071]-[0074]).

Regarding **claim 15** as applied to claim 14, Lin further discloses wherein the one or more mobile stations are associated with one or more calls (see p.5, [0071]-[0074]); wherein the switch component is operable to employ the at least one call parameter to perform an identification of the one or more calls from a plurality of calls (see p.5, [0071]-[0074]); wherein the switch component employs the identification of the one or more calls from the plurality of calls to obtain the one or more positions of the one or more mobile stations that are associated with the one or more calls (see p.5, [0071]-[0074]).

Regarding **claim 16** as applied to claim 13, Lin as modified by Wong and O'Donnell disclose the claimed limitation. O'Donnell further discloses wherein the network component (base station controller BSC, see figs. 3, lines 33-38) and the switch component (mobile switching center MSC, see col. 5, lines 40-42) are operable to receive the one or more positions of the one or more mobile stations from the position component (the MSC and BSC receive the current location of the mobile station, see col. 5, lines 33-49, col. 6, lines 38); and wherein the network component and the switch component are operable to cooperate to develop a coverage map through employment of the one or more positions of the one or more mobile stations (see col. 5, lines 49-52, col. 6, lines 32-38).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin, Wong and O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station and determining a visual indication of network

coverage for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 17** as applied to claim 16, Lin as modified by Wong and O'Donnell discloses the claimed limitation. O'Donnell further discloses wherein the position component (GPS 220, see fig. 2, col. 5, line 6) is operable to employ one or more of an Enhanced Forward Link Trilateration algorithm and an 1S-80l solution using an Assisted Global Positioning System (AGPS), Advanced Forward Link Trilateration (AFLT) or combined AGPS/MLT algorithm to determine the one or more positions of the one or more mobile stations (the position of the mobile station can be determined using the GPS receiver in the mobile station or by employing triangulation, see col. 5, lines 2-19, col. 6, lines 24-32).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin, Wong and O'Donnell by employing a GPS receiver for the determining accurate geographical locations.

Regarding **claim 19**, as applied to claim 18, Lin as modified by Wong disclose the claimed limitation, but does not specifically disclose wherein the step of initiating the request from the network component to the switch component for the one or more positions of the one or more mobile stations through employment of the one or more call characteristics further comprises the steps of: performing a comparison of the one or more call characteristics with one or

more thresholds, and initiating the request for the one or more positions of the one or more mobile stations based on the comparison.

In the same field of endeavor, O'Donnell further discloses wherein the step of initiating the request from the network component to the switch component for the one or more positions of the one or more mobile stations through employment of the one or more call characteristics further comprises the steps of: performing a comparison of the one or more call characteristics with one or more thresholds (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38), and initiating the request for the one or more positions of the one or more mobile stations based on the comparison (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 20**, as applied to claim 19, Lin as modified by Wong and O'Donnell disclose the claimed limitation. O'Donnell further discloses wherein the step of initiating the request from the network component to the switch component for the one or more positions of the one or more mobile stations based on the comparison further comprises the steps of: determining the at least

one call parameter (BSC compiles the mobile station identification, see col. 6, lines 32-35) associated with the one or more thresholds (see col. 6, line 32-38), identifying the one or more mobile stations from a plurality of mobile stations through employment of the at least one call parameter (see col. 6, line 32-38); and initiating the request for the one or more positions of the one or more mobile stations through employment of the at least one call parameter (BSC requests for the position of mobile station 4 if the signal strength falls below a specified threshold value, see figs. 3 and 4, col. 6, lines 6-38).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 23** as applied to claim 5, Lin as modified by Wong and O'Donnell disclose the claimed limitation. O'Donnell further discloses wherein the thresholds provide a measure of a quality of service provided to the one or more mobile stations (visual representation of service levels, see col. 6 lines 33-39).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Lin, Wong and O'Donnell by requesting for a position of a mobile device based on the RSSI of the mobile station and determining a visual indication of network coverage for the benefit of identifying areas in a network with poor network coverage.

Regarding **claim 25** as applied to claim 1, Lin as modified by Wong disclose the claimed limitation except wherein the network component limits a number of requests for the one or more positions of the one or more mobile stations based upon a comparison of the one or more call characteristics with one or more thresholds.

However, O'Donnell further discloses wherein the network component limits a number of requests for the one or more positions of the one or more mobile stations based upon a comparison of the one or more call characteristics with one or more thresholds (limiting the number of requests made by the BSC for the position of mobile stations by adjusting the threshold levels of the signal strength in the cells such that the number of requests is limited based on increasing/decreasing the specified signal quality threshold of the cells, see col. 5, lines 52-67, col. 6, lines 1-28).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of O'Donnell into the system of Lin as modified by Wong by requesting for a position of a mobile device based on the RSSI of the mobile station, for the benefit of identifying areas in a network with poor network coverage.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lin 20020025824** in view of **Wong 7,039,403** and **O'Donnell 6,266,514** as applied to claim 16 above and further in view of **Alperovich et al 6,233,448** (**hereinafter Alperovich**).

Regarding **claim 22** as applied to claim 16, Lin as modified by Wong and O'Donnell, discloses the claimed limitation except wherein the position determination component is pre-provisioned with one or more intervals of time to determine the one or more positions of the one or more mobile stations.

Alperovich, however, discloses a position determination component that is pre-provisioned with one or more intervals of time to determine the one or more positions of the one or more mobile stations (see fig. 1, col. 3, lines 29-64).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Alperovich into the system of Lin as modified by Wing and O'Donnell for the benefit of determining the current position of a mobile station.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lin 20020025824** in view of **Wong 7,039,403** and **O'Donnell 6,266,514** as applied to claim 4 above, and further in view of **Powers et al 6,832,086** (**hereinafter Powers**).

Regarding **claim 25** as applied to claim 4, Lin as modified by Wong and O'Donnell disclose the claimed limitation except wherein on of the one or more call statistics is a number of dropped calls within an hour.

In the same field of endeavor, Powers discloses a network component that create call statistics, wherein the call statistics is a number of dropped calls within an hour (BSC determining a number of dropped calls within an hour, see figs. 1-4, col. 5, lines 25-31).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Powers, by using the BSC to determine a number of dropped calls within an hour in a cell/area, into the system of Lin as modified by Wong and O'Donnell for the benefit of benefit of taking corrective/preventive action in the cell/area to reduce the number of dropped calls in the cell/area.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OLUMIDE T AJIBADE AKONAI/
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